

Claims:

1. An image signal processor comprising:
an input means for inputting an image signal;
a camera operation estimating means for estimating a start time and/or a completion time of a camera operation from a movement detected by the inputted image signal and extracting the image signal at the estimated start time and/or the estimated completion time of the camera operation; and
an output means for outputting the extracted image signal.
2. The image signal processor according to claim 1, wherein the inputted image signal is composed of an image signal for a frame unit.
3. The image signal processor according to claim 1, further comprising a first memory for storing the inputted image signal, wherein the camera operation estimating means extracts the image signal at the estimated start time and/or the estimated completion time of the camera operation from the first memory.
4. The image signal processor according to claim 1, wherein the camera operation estimating means further includes a movement detecting means for detecting the movement of the inputted image signal, and the movement is determined on the basis of the movement vectors of pixels of the inputted image signal.
5. The image signal processor according to claim 4, wherein the camera operation estimating means further includes a movement vector number deciding

means for deciding the number of movement vectors for each of the directions of the movement vectors to determine the movement on the basis of the output of the movement vector number deciding means.

6. The image signal processor according to claim 4, wherein the movement is determined on the basis of the movement vectors of pixels for each frame unit of the inputted image signal.

7. The image signal processor according to claim 4, wherein the camera operation estimating means further includes a second memory for storing the movement of the past and the start time and/or the completion time of the camera operation are decided on the basis of the determined movement and the output of the second memory.

8. The image signal processor according to claim 7, the past movement is a lastly detected movement of the movement.

9. The image signal processor according to claim 7, wherein when the output of the second memory is different from the movement and the output of the second memory has no movement, the camera operation estimating means estimates it to be the start time of the camera operation, and when the output of the second memory is different from the movement and the output of the second memory has a movement, the camera operation estimating means estimates it to be the completion time of the camera operation.

10. The image signal processor according to claim 4, wherein the movement

indicates a direction in which the camera operation moves.

11. The image signal processor according to claim 4, wherein the camera operation indicates a panning operation in a horizontal direction or a tilting operation in a vertical direction, and when the threshold value or more of the movement vectors are located in the horizontal direction or in the vertical direction, the camera operation estimating means estimates them to be the panning operation or the tilting operation, respectively.

12. The image signal processor according to claim 4, wherein the camera operation is a zooming operation and when the movement vectors are radial, the camera operation estimating means estimates it to be the zooming operation.

13. The image signal processor according to claim 1, wherein the output means outputs the inputted image signal together with the extracted image signal.

14. The image signal processor according to claim 13, further comprising a synthesizing means for synthesizing the extracted image signal with the inputted image signal, wherein the output means outputs a synthesized image synthesized by the synthesizing means.

15. The image signal processor according to claim 14, further comprising a display means for displaying the synthesized image.

16. An image signal processing method comprising:

an input step of inputting an image signal;

a camera operation estimating step of estimating a start time and/or a

completion time of a camera operation from a movement detected by the inputted image signal and extracting the image signal at the estimated start time and/or the estimated completion time of the camera operation; and

an output step of outputting the extracted image signal.

17. A program for performing a prescribed process by a computer comprising:

an input step of inputting an image signal;

a camera operation estimating step of estimating a start time and/or a completion time of a camera operation from a movement detected by the inputted image signal and extracting the image signal at the estimated start time and/or the estimated completion time of the camera operation; and

an output step of outputting the extracted image signal.

18. A recording medium capable of being read by a computer on which a program for performing a prescribed process by the computer is recorded; said program comprising:

an input step of inputting an image signal;

a camera operation estimating step of estimating a start time and/or a completion time of a camera operation from a movement detected by the inputted image signal and extracting the image signal at the estimated start time and/or the estimated completion time of the camera operation; and

an output step of outputting the extracted image signal.

19. An image signal processing system comprising:

an image signal processor including an input means for inputting an image signal; a camera operation estimating means for estimating a start time and/or a completion time of a camera operation from a movement detected by the inputted image signal and extracting the image signal at the estimated start time and/or the estimated completion time of the camera operation; and an output means for outputting the extracted image signal and

a plurality of display devices for displaying the inputted image signal and the extracted image signal.

20. The image signal processing system according to claim 19, wherein the image signal processor controls an image signal displayed on each of the display devices among the extracted image signals in accordance with the arrangement of the plurality of display devices.